

WHAT IS CLAIMED IS:

1. A composition of matter comprising a batch of copolymer, the copolymer containing repeating units derived from glycolide and repeating units derived from lactide, wherein said batch possesses an inherent viscosity in the range of from about 1.30 to about 1.55, and wherein the standard deviation of inherent viscosity measurements from 10 or more random samples selected from within the batch is about 0.05 or less.

2. The composition of claim 1 wherein the inherent viscosity ranges from about 1.33 to about 1.38.

3. The composition of claim 1 wherein the standard deviation of inherent viscosity measurements is about 0.03 or less.

4. The composition of claim 1 wherein the standard deviation of inherent viscosity measurements is about 0.01 or less.

5. The composition of claim 1 wherein the copolymer contains from about 15 to about 25 mole percent of repeating units derived from glycolide.

6. The composition of claim 1 wherein the copolymer contains from about 75 to about 85 mole percent of repeating units derived from lactide.

5 7. The of claim 1 wherein the batch contains is at least about 20 kilograms of copolymer.

10 8. A composition of matter comprising a copolymer containing repeating units derived from glycolide and repeating units derived from lactide, the copolymer having a BVD of about 0.05 or less.

15 9. A method for making a batch of an absorbable polymeric resin comprising the steps of:

a) introducing into a reaction vessel at least one monomer;

b) drying the at least one monomer under an inert gas purge for at least about 6 hours at a temperature of less than about 50°C. and at atmospheric pressure;

20 c) polymerizing the at least one monomer at a temperature of from about 156°C. to about 160°C. under an inert gas atmosphere at an elevated pressure of from about 1 psig to about 6 psig for a period of time sufficient to produce a polymeric resin;

5 d) drying the polymeric resin in an inert gas atmosphere and under a reduced pressure of no more than about 20 torr psia by maintaining the polymeric resin at ambient temperature for at least about 4 hours, then raising the temperature of the polymeric resin to a drying temperature of at least about 120°C. to about 130°C. at the rate of from about 1°C. to about 3°C. per hour, then maintaining the drying temperature of the polymeric resin for at least about 48 hours to produce a batch of an absorbable polymeric resin having an inherent viscosity characterized by a standard deviation of about 0.05 or less.

10 10. The method of claim 9 wherein the at least one monomer comprises glycolide and lactide.

15 11. The method of claim 10 wherein the mole ratio of glycolide to lactide ranges from about 15:85 to 25:75.

20 12. The method of claim 10 wherein the step of polymerizing the at least one monomer is performed in the presence of a catalyst and an initiator.

13. The method of claim 12 wherein the catalyst is stannous octoate and the initiator is glycolic acid.

14. The method of claim 9 wherein the polymeric resin is extruded, quenched and pelletized prior to the step of drying the polymeric resin.

5 15. The method of claim 9 further including the steps of

heating the reaction vessel at least about 195°C. for at least 1 hour under a reduced pressure of no more than about 1 torr, then purging the reaction vessel with the  
10 inert gas and allowing the reaction vessel to cool to below 30°C. prior to the step of introducing the at least one monomer into the reaction vessel.

15 16. The method of claim 9 wherein the inert gas is nitrogen.

17. A composition of matter comprising batch of copolymer containing repeating units derived from glycolide and repeating units derived from lactide, said batch  
20 possessing an inherent viscosity of from about 1.30 to about 1.55, and wherein the standard deviation of inherent viscosity measurements from ten or more random samples selected forms within the batch is about 0.05 or less, the batch being produced by:

a) introducing glycolide monomer and lactide monomer into a reaction vessel;

b) drying the glycolide monomer and lactide monomer under an inert gas purge for at least about 6 hours at a temperature of less than about 50°C. and at atmospheric pressure;

c) polymerizing the glycolide and lactide in the presence of a catalyst and an initiator at a temperature of from about 150°C. to about 165°C. under an inert gas atmosphere at an elevated pressure of from about 1 psig to about 6 psig for a period of time sufficient to produce a glycolide/lactide copolymer;

d) drying the glycolide/lactide copolymer in an inert gas atmosphere and under a reduced pressure of no more than about 20 torr by maintaining the glycolide/lactide copolymer at ambient temperature for at least about 4 hours, then raising the temperature of the glycolide/lactide copolymer to a maximum drying temperature of from about 125°C. to 130°C. at the rate of from about 1°C. to about 3°C. per hour, then maintaining the temperature of the glycolide/lactide copolymer at the maximum drying temperature for at least about 48 hours.